

## **ABSTRACT**

### **SYSTEM AND METHOD FOR CHARGE-BALANCED CONTINUOUS WRITE MASK AND WAFER PROCESS FOR IMPROVED COLINEARITY**

[0044] A charge-balanced, continuous-write mask and wafer process changes the magneto resistive photo-definition step to a two-mask step operation. Critical images are written on one mask layer at a very small electron beam spot size, and non-critical images are written on a second mask layer at a relatively larger electron beam spot size. Both mask layers are put onto the same glass substrate where the critical mask layer is located at the most accurate position on the substrate. The non-critical images may be placed in a peripheral field. In wafer processing, the critical field is aligned and exposed onto the wafer and then the non-critical field is aligned and exposed.